

Application No. 10/526,775  
 Attorney Docket No. 12480-000105/US

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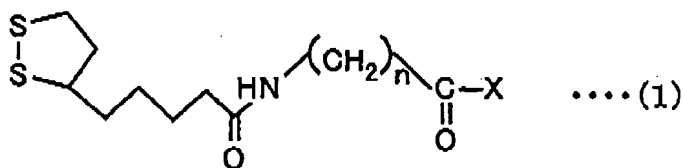
# AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

## LISTING OF CLAIMS

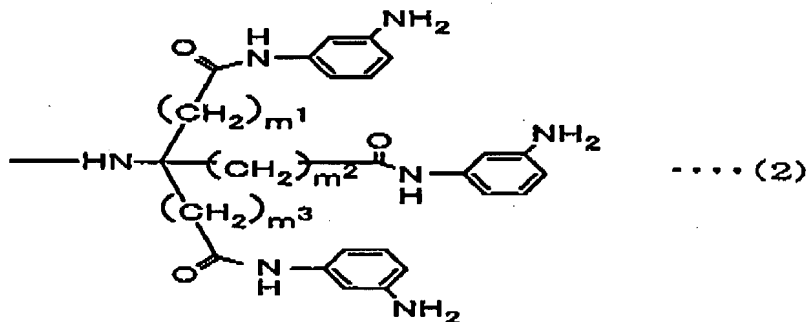
1. (Currently Amended) A linker compound comprising:

a structure represented by following general formula (1)~~[[,]]~~: where ~~n~~ is an integer of 1 to 6, and



where n is an integer of 1 to 6, and

said X has a structure represented by the following general formula (2)~~[[,]]~~: where ~~m<sup>1</sup>, m<sup>2</sup> and m<sup>3</sup>~~ are independently an integer of 1 to 6.



where m<sup>1</sup>, m<sup>2</sup> and m<sup>3</sup> are independently an integer of 1 to 6.

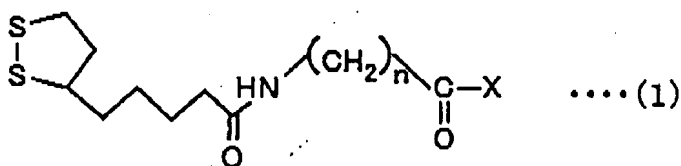
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2. (Cancelled).

3. (Previously Presented) The linker compound according to Claim 1, wherein  $m^1$ ,  $m^2$ , and  $m^3$  are all 2 in said general formula (2).

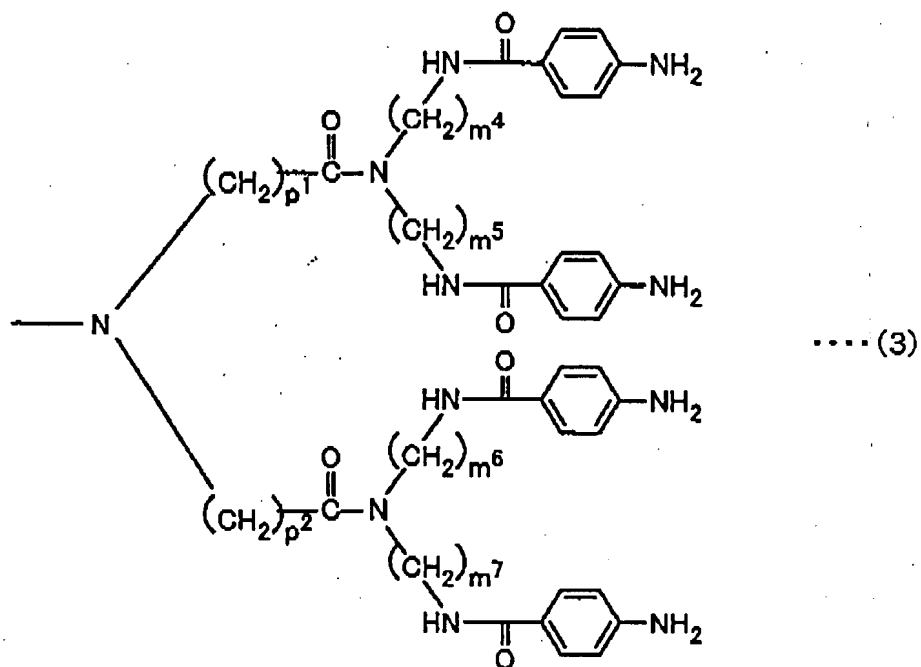
4. (Currently Amended) A linker compound comprising:

a structure represented by following general formula (1)[[.]]: ~~where n is an integer of 1 to 6, and~~



where n is an integer of 1 to 6, and

said X has a structure represented by following formula (3)[[.]]: ~~where  $m^4, m^5, m^6, m^7, p^1$ , and  $p^2$  are independently an integer of 1 to 6.~~



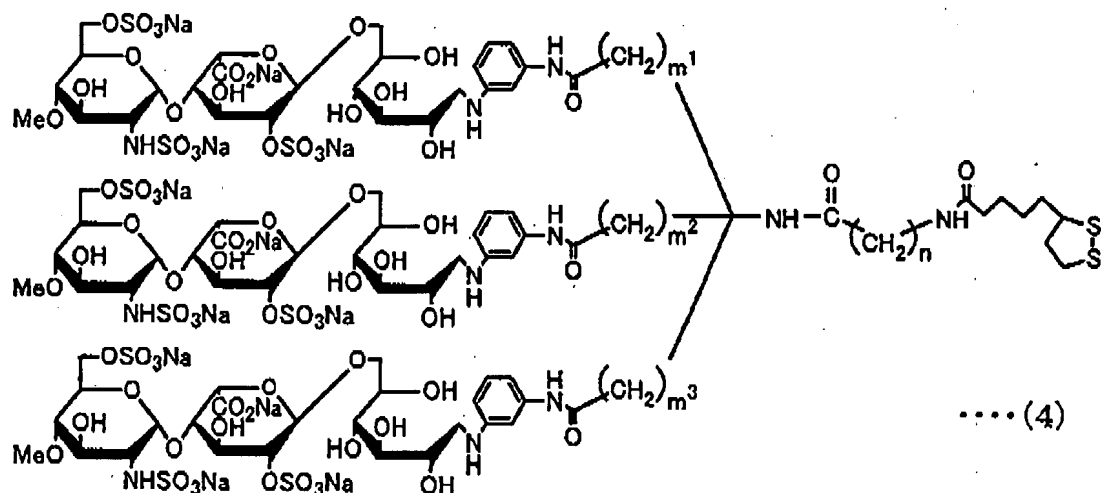
where  $m^4$ ,  $m^5$ ,  $m^6$ ,  $m^7$ ,  $p^1$ , and  $p^2$  are independently an integer of 1 to 6.

5. (Previously Presented) The linker compound according to Claim 4, wherein  $m^4$ ,  $m^5$ ,  $m^6$ , and  $m^7$  are all 2 and  $p^1$  and  $p^2$  are both 1 in the general formula (3)

6. (Previously Presented) A ligand which comprises the aromatic amino group of the linker compound according to Claim 1, and a sugar molecule introduced into the aromatic amino group.

7. (Original) The ligand according to Claim 6, wherein the sugar molecule is at least one kind of sugar selected from the group consisting of a monosaccharide, an oligosaccharide, and a polysaccharide.

8. (Currently Amended) A ligand of a structure represented by following general formula (4)[L]: wherein  ~~$m^1$ ,  $m^2$ ,  $m^3$ , and  $n$  are independently an integer of 1 to 6.~~

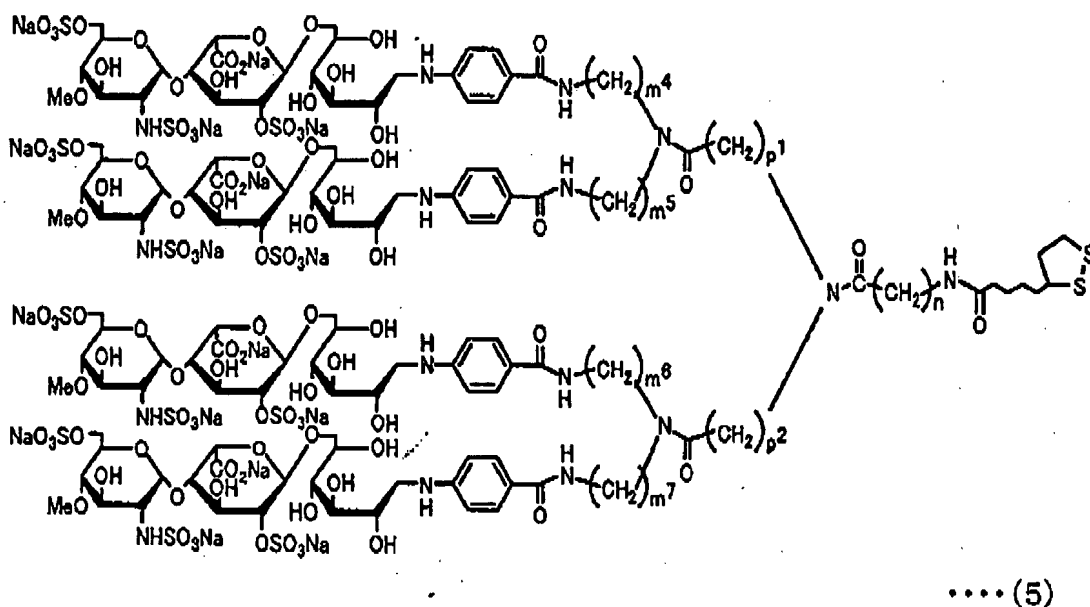


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wherein  $m^1$ ,  $m^2$ ,  $m^3$ , and  $n$  are independently an integer of 1 to 6.

9. (Original) The ligand according to Claim 8, wherein  $m^1$ ,  $m^2$ , and  $m^3$  are all 2 and  $n$  is 1 in the general formula (4).

10. (Currently Amended) A ligand comprising a structure represented by following formula (5) [L<sub>1</sub>], wherein  $m^4$ ,  $m^5$ ,  $m^6$ ,  $m^7$ ,  $n$ ,  $p^1$ , and  $p^2$  are independently an integer of 1 to 6.



wherein  $m^4$ ,  $m^5$ ,  $m^6$ ,  $m^7$ ,  $n$ ,  $p^1$ , and  $p^2$  are independently an integer of 1 to 6.

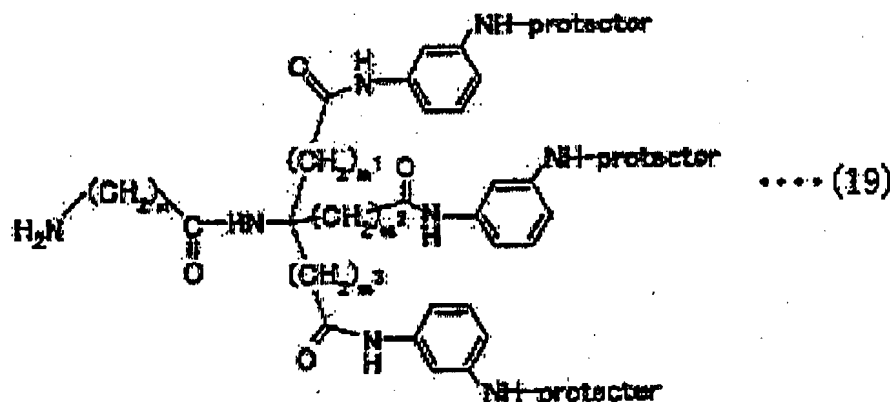
11. (Original) The ligand according to Claim 10, wherein  $m^4$ ,  $m^5$ ,  $m^6$ , and  $m^7$  are all 2, and  $n$  is 1, and  $p^1$  and  $p^2$  are both 1 in the general formula (5).

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12. (Currently Amended) A ~~producing~~ method of producing the linker compound of claim 1, comprising:

carrying out a condensation reaction between thioctic acid and an amine compound whose aromatic amino group end is protected by a protecting group which is a t-butoxycarbonyl group, a benzyl group, or an allyl carbamate group, the amine compound being represented by the following general formula (19)[[.]]: where  $n$ ,  $m^1$ ,  $m^2$  and  $m^3$  are independently an integer of 1 to 6; and

~~deprotecting the protecting group at the aromatic amino group end.~~



where  $n$ ,  $m^1$ ,  $m^2$  and  $m^3$  are independently an integer of 1 to 6; and  
deprotecting the protecting group at the aromatic amino group end.

13. (Currently Amended) A ~~producing~~ method of a ligand, comprising ~~the step of~~ carrying out a reductive amination reaction using ~~between~~ the linker compound according to Claim 1, and a sugar molecule.

14. (Currently Amended) A ~~sugar molecule introducing~~ method of immobilizing a  
ligand containing~~for arranging~~ a sugar molecule on a surface of a support,

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~~said method comprising which comprises, by causing allowing~~ a solution containing the ligand of Claim 6 to come into contact with ~~the surface of the~~ support whose surface has a metal, to forming a S-metal bond between a S-S bond contained in the ligand of claim 6 and the metal of the surface of the support, via which S-metal bond, a sugar molecule contained in the ligand of claim 6 is ~~arranged~~ immobilized on the surface of the support.

15. (Currently Amended) A ligand carrier which comprises the ligand of Claim 6 immobilized on a surface of a support whose surface has a metal.

16. (Previously Presented) The ligand carrier according to Claim 15, wherein the support is a sensor chip for a surface plasmon resonance measurement.

17. (Previously Presented) The ligand carrier according to Claim 15, wherein the support is a column for affinity chromatography.

18. (Currently Amended) A ~~sugar molecule introducing method~~ of immobilizing a ligand containing for arranging a sugar molecule on a surface of a support,

~~said method comprising which comprises, by causing allowing~~ a solution containing the ligand of Claim 8 to come into contact with ~~the surface of the~~ support whose surface has a metal, to forming a S-metal bond between a S-S bond contained in the ligand of claim 8 and the metal of the surface of the support, via which S-metal bond, a sugar molecule contained in the ligand of Claim 8 is ~~arranged~~ immobilized on the surface of the support.

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19. (Currently Amended) A ligand carrier which comprises the ligand of Claim 8 immobilized on a surface of a support whose surface has a metal.

20. (Previously Presented) The ligand carrier according to Claim 19, wherein the support is a sensor chip for a surface plasmon resonance measurement.

21. (Previously Presented) The ligand carrier according to Claim 19, wherein the support is a column for affinity chromatography.

22. (Currently Amended) A ~~sugar molecule introducing method~~ of immobilizing a ligand containing for arranging a sugar molecule on a surface of a support, which comprises said method comprising, by causing allowing a solution containing the ligand of Claim 10 to come into contact with at the surface of the support whose surface has a metal, to forming a S-metal bond between a S-S bond contained in the ligand of claim 10 and the metal of the surface of the support, via which S-metal bond, a sugar molecule contained in the ligand of Claim 10 is arranged-immobilized on the surface of the support.

23. (Currently Amended) A ligand carrier which comprises the ligand of Claim 10 immobilized on a surface of a support whose surface has a metal.

24. (Previously Presented) The ligand carrier according to Claim 23, wherein the support is a sensor chip for a surface plasmon resonance measurement.

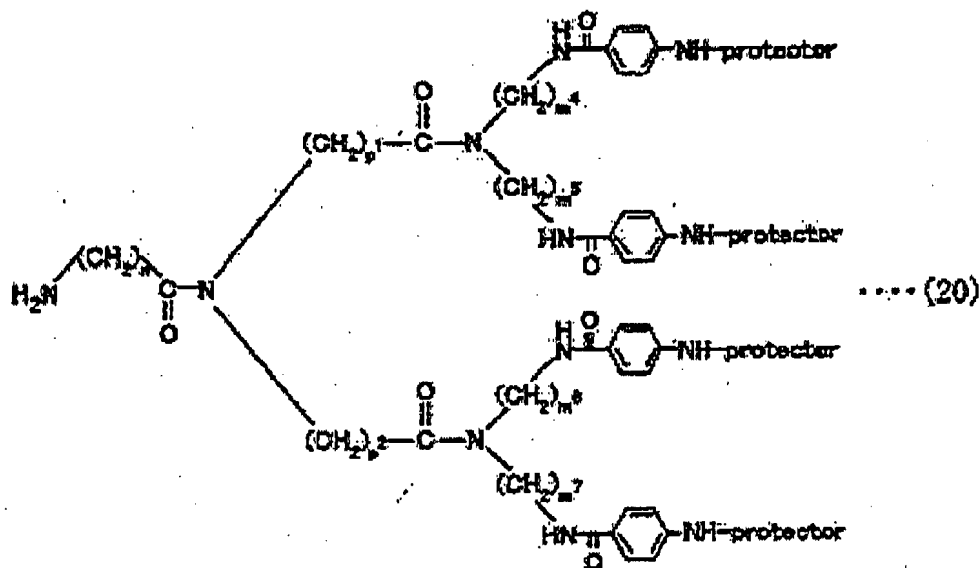
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25. (Previously Presented) The ligand carrier according to Claim 23, wherein the support is a column for affinity chromatography.

26. (Currently Amended) A ~~producing method of~~ producing the linker compound of Claim 4, comprising:

carrying out a condensation reaction between thioctic acid and an amine compound whose aromatic amino group end is protected by a protecting group which is a t-butoxycarbonyl group, a benzyl group, or an allyl carbamate group, the amine compound being represented by the following general formula (20) [L, I]: where ~~n, m4, m5, m6, m7, p1, and p2, are independently an interger of 1 to 6; and~~

~~deprotecting the protecting group at the aromatic amino group end.~~



where n, m4, m5, m6, m7, p1, and p2, are independently an integer of 1 to 6; and  
deprotecting the protecting group at the aromatic amino group end.